

nate, rarely somewhat rounded at the top; its cells are nearly parallel throughout their whole length; the central line between the cells is a deep furrow in front and a keel behind, and the stigma is rather broad, truncate, folded so as to leave a channel between its pointed lobes, its middle emarginate.

*H. fornicata*, Bab., Pl. bifolia, *Reich.*, has a hooded anther with parallel cells and the upper petals not converging.

St. John's Coll., Cambridge, May 18, 1838.

XLI.—*Floræ Insularum Novæ Zelandiæ Precursor; or a Specimen of the Botany of the Islands of New Zealand.* By ALLAN CUNNINGHAM, Esq.

[Continued from p. 216.]

EUPHORBIACEÆ, *Ad. de Juss.*

1. EUPHORBIA, *L.*

339. *E. glauca*, caule fruticoso, foliis ad apices ramorum confertis lanceolatis integerrimis glabris, umbella 4—6 radiata, radiis simplicibus trichotomisque, foliis floralibus oppositis ovali-acutis, involucris 4—5 fidis. *Endl. Prodr. Fl. Norf.* p. 86. *Forst. Prodr. n.* 208. *Spreng. Syst. Veg.* iii. p. 790. *A. Rich. Fl. Nov. Zel.* p. 352.  *Ic. Ferd. Bauer, t.* 166. (*Endl.*)—*Kekiri gnott* of the natives, around whose houses the plant is frequent. *D'Urville.*

New Zealand (Middle Island), Astrolabe Harbour.—1827, *D'Urville.* (Northern Island), sandy shore, at the embouchure of the Hokianga river.—1820, *A. Cunningham.*

SANTALACEÆ, *R. Br.*

1. MIDA, (*Thesium, Linn.*)

*Perianthium* 5-partitum, persistens, glandulosum. *Disco epigyno* nullo.

*Stam.* 5, extus fasciculo gracili villorum munita. *Antheræ* biloculares.

*Stigma* 3—4 lobum. *Nux* corticata coronata. *R. Br. in obs.*:—Arbusculæ glabræ, ramis ramulisque plerumque alternis. *Folia alterna, quandoque subopposita, utrinque glabra, nitida, venosa.* Flores racemosi axillares s. terminales. Nomen vernaculum *Mida*, unde nom. generis.

*R. Cunningham.*

340. *M. salicifolia*, foliis angusto-lanceolatis attenuatis.

New Zealand (Northern Island). A slender tree fifteen feet high, bearing flower and fruit in October, in the forests of Wangaroa.—1826, *A. Cunningham.*—1834, *R. Cunningham.*

341. *M. eucalyptoides*, foliis lanceolatis acuminatis.

New Zealand (Northern Island). A small tree fifteen to twenty feet high, in fruit in October and November in shady woods at Wangaroa.—1826, *A. Cunningham.*

342. *M. myrtifolia*, foliis ovalibus ovato-lanceolatis obtusiusculis acuminatisve.

New Zealand (Northern Island). A tree thirty feet high; growing in woods in the neighbourhood of the Bay of Islands.—1826, *A. Cunningham*.

THYMELÆÆ, *Juss.*

1. PIMELEA, *Banks and Solander, Sm.*

(*Passerinæ et Banksiæ*, *sp. Forst.*)

343. *P. Guidia*, *Vahl. Willd. Sp. Pl.* 1. p. 50. *Rœm. & Sch. Syst. Veg.* 1. p. 274. *A. Rich. Fl. Nov. Zel.* p. 171.—*Banksia Guidia. Forst. Gen. Char.* p. 8.—*Cookia Guidia. Gmel. Syst. Veg.* p. 24.

New Zealand (Middle Island), upon rocks on the shores of Dusky Bay; also on the summits of the mountains.—1773, *G. Forster*.—1781, *A. Menzies, Esq.* Astrolabe Harbour.—1827, *D'Urville*.

*Obs. Frutex* bi- vel tri-orgyalis, erectus, ramosissimus, glaberrimus. *Flores* albi odorati, extus non raro carnei. *Perianthium* externe villosum.

344. *P. pilosa. Vahl. Willd. Sp. Pl.* 1. p. 50. *Rœm. et Sch. Syst. Veget.* 1. p. 275. *A. Rich. Fl. Nov. Zel.* p. 172.—*Banksia tomentosa. Forst. Char. Gen.* p. 8.—*Cookia pilosa. Gmel. Syst. Veg.* p. 24.

New Zealand (Middle Island), in thickets on the coast, as also in the mountainous districts.—1773, *G. Forster*.

*Obs. Caulis* fruticosus erectus,  $\frac{1}{2}$  orgyalis, glaber. *Ramuli* albo villo vestiti. *Folia* opposita, linearia, obtusa. *Flores* albo-sericei.

345. *P. virgata. Vahl. Enum.* 1. p. 306. *Rœm. et Sch. Syst. Veget.* 1. p. 275. *A. Rich. Fl. Nov. Zel.* p. 173.—*P. axillaris. Banks and Sol. Mss.*—*Kai-Kai Atuaniu. Incol. Anglice*, "The food of the Great God."

New Zealand (Northern Island).—1769, *Sir Jos. Banks*. Among under-wood and in bushy moist grounds, Bay of Islands.—1826, *A. Cunningham*.—1834, *R. Cunningham*.

346. *P. prostrata. Vahl. Willd. Sp. Pl.* 1. p. 51. *Rœm. et Sch. Syst. Veget.* i. p. 274. *A. Rich. Fl. Nov. Zel.* p. 174.

New Zealand (Middle Island), on barren mountains.—1773, *G. Forster*. Shores of Astrolabe Harbour.—1827, *D'Urville*. (Northern Island,) in open fern grounds, Bay of Islands.—1826, *Allan Cunningham*.—1834, *R. Cunningham*.

347. *P. arenaria*, foliis decussato-oppositis ellipticis obtusiusculis patentibus, supra glabris, subtus cano-hirtis, floralibus capitulum 5—7 florum subæquantibus, perianthii tubo brevissimo subaristato lanuginoso persistente, styli staminibus parum longiore, fructu baccato. *Accum in Bot. Mag. t.* 3270.—*Ou-tato-rangha* of the natives. *Rich. Cunningham*.

New Zealand (Northern Island), sandy ridges at the mouth of the Hokianga River.—1826, *A. Cunningham*. At Takou, on the east coast, near Wangaroa.—1834, *R. Cunningham*.

348. *P. Urvilliana*, foliis (parvulis) oppositis ovalibus obtusis glabris, capitulis 6—8-floris, perianthii tubo brevissimo, externe dense albido-sericeo,

laciniis patulis suborbicularibus obtusis, staminibus brevissimis fauci insertis, stylo tubo perianthii duplo longiore. *A. Rich. Fl. Nov. Zel. p. 175.*

New Zealand (Middle Island), shores of Tasman's Bay.—1827, *D'Urville*. (Northern Island), on dry hills, among fern, Bay of Islands.—1834, *R. Cunningham*.

#### PROTEACEÆ.

##### 1. PERSOONIA, *Smith*.

349. *P. Tora*, foliis elongato-laciniatis acutis basi attenuatis strictis subfalcatis obsolete trinerviis utrinque glabris nitidis, racemis axillaribus lateralibusve multifloris, pedunculis perianthiisque tomento ferrugineo tectis, ovariiis glabris dispermnis epedicellatis, caule arborescenti, cortice lævi. *A. Cunn. in Bot. Mag. t. 3513.*—*Tora* incolis audit, unde nomen triviale.

New Zealand (Northern Island), on the wooded ridges of the highest hills near Wangaroa, near the shores of the Bay of Islands, and in the great Forest near Hokianga, &c.—1826, *A. Cunningham*.—1833, *R. Cunningham*.

*Obs.* *Arbor* sempervirens, 20—40 pedes alta, potius gracilis, admodum venusta, et in habitu omnino aliquot specierum *Acaciarum aphyllarum*, trunco erecto ad basin diametro 6 uncias æquante, cortice lævi, sursun ramosissimo. *Folia* alterna, versus apices ramulorum confertiora, elongata, coriacea, valde glabra, supra nitidissima, venosa, sæpe sex uncias longa, et semiunciam lata. *Racemi* plerumque axillares, erecti multiflori, tomento rubiginoso tecti, flores unibracteati. *Ovarium* glabrum, dispermum, sessile, vel epedicellatum. *Glandulæ hypogynæ* 4, brevissimæ. *Stigma* depresso-capitatum. *Drupa* baccata, putamine biloculari.

##### 2. KNIGHTIA, *Brown in Linn. Soc. Trans., v. 10.*

350. *K. excelsa*, foliis oblongo-ellipticis lanceolato-oblongisve obtusis coriaceis glabris profunde serratis, serraturis remotis, racemis axillaribus subsessilibus multifloris, perianthiis ferrugineo-tomentosis, bracteis (parvis) solitariis deciduis, stylis elongatis persistentibus, caule arborescenti. *Br. in Linn. Soc. Trans. vol. x. p. 194. tab. Rœm. et Sch. Syst. Veget. iii. p. 431.*—*Rewa-rewa* of the natives. *Yate*.

*Obs.* Distinctum a *Ropala* affini, seminibus quaternis, apice solum alatis. —*R. Br.*

\*New Zealand (Northern Island), east coast. A noble tree, often eighty feet high, discovered at Opuraga (Mercury Bay, in lat. 36° 45' S.) and near Tolaga (Howa-Howa Bay, 38° 22' S.)—1769, *Sir Jos. Banks*. Dry forests near the Bay of Islands and Wangaroa.—1826, *A. Cunningham*.—1833, *R. Cunningham*.

\* The hitherto very obscurely known *Embothrium strobilinum* of M. La-billardière, erroneously stated by that author to be a native of Western Australia (Terra de Leuwin), has been at length ascertained by Mr. Brown to belong to the above genus, its ovarium containing 4 ovules. The structure however of the matured seeds is not yet ascertained. In the mean time, it may be considered a *Knightsia*, though, as Mr. Brown suggests, of a distinct section from *K. excelsa*, and may be thus characterized:

*K. integrifolia* (*Encarpha*), foliis obovato-oblongis subspathulatis integris, racemis densis obovato-capitatis, axillaribus pedunculatis, perianthiis glabris,

The wood of the *Rewa-rewa* is beautifully variegated, being mottled with red, upon a ground of light brown; it is therefore well adapted for making articles of elegant furniture. The freedom with which it splits causes it to be far more frequently employed for paling-fences; but roofing-shingles made of it are found to warp readily with the sun.

LAURINÆ, *Ventenat.*1. LAURUS, *L., Brown.*

*Flores* hermaphroditi aut dioici. *Perianthium* 6-fidum æquale. *Stamina* 12, duplici ordine; exteriora 6 fertilia, interiora 6 exterioribus opposita, horum 3 sunt fertilia, basi biappendiculata aut biglandulosa, cætera alterna sterilia. *Antheræ* biloculares. *Stigma* capitatum. *Drupa* nuda monosperma.

351. *L. Tarairi*, arborea, foliis lato-ellipticis coriaceis obtusis petiolatis, supra glaberrimis, subtus venosis glaucis ramulisque tomentosis, racemis paniculatis ferrugineo-lanatis axillaribus terminalibusve, foliolis perianthii oblongo-ellipticis acutiusculis.—*L. macrophylla*. (*A. C. Mss.* 1826, non *Don.*) *Tarairi Incol.*

New Zealand (Northern Island). A tree fifty to seventy feet high, in dry woods on the banks of rivers, Bay of Islands, Wangaroa, &c.—1826, *A. Cunningham*.—1834, *R. Cunningham*.

*Obs.* The timber is white and splits freely, but is seldom employed.

352. *L. Tawa*, arborea, foliis lanceolatis acuminatis subundulatis minutissime venoso-reticulatis, supra glabris nitidis, subtus glaucis adpresso-sericeis, racemis paniculatis pilosiusculis terminalibus, pilis cinereis sparsis, ramulis petiolisque foliorum juniorum tomentosis, perianthii laciniis ovalibus obtusis.—*Tawa*, Indigenis.—*L. salicifolia*. *Banks et Sol. Mss.* non *Swartzii*.

New Zealand (Northern Island).—1769, *Sir Jos. Banks*. A tree forty to sixty feet high, frequent in shaded moist forests, at the Bay of Islands, &c.—1826, *A. Cunningham*.—1834, *R. Cunningham*.

The wood of the *Tawa* is light, and on account of the facility with which it splits is used by the natives for their short fences. It decays, however, in the course of two years and becomes perfectly useless; but as the New Zealanders seldom cultivate one spot for a longer period than two successive years, they do not experience the inconvenience which would otherwise accrue from the rapid decay of

bracteis (maximis) ellipticis imbricatis mox deciduis, stylis caducis, caule fruticoso.—*Embothrium strobilinum*. *Labill. Nov. Holl.* ii. p. 116. t. 265. *Ræm. et Sch. Syst. Veg.* iii. p. 432. (*vide fig.*)

*Hab.* In Nova Caledonia, *Labill.*, sed nunquam Terra Van Leuwin, incola.

*Obs.* *Frutex* orgyalis, ramis teretibus erectis. *Folia* petiolata, obovata, integra, venosa, infra attenuata. *Gemmæ florigeræ* axillares solitariae, pedunculatae, strobiliformes, bracteis ovatis deciduis. *Folliculus lignosus*, oblongus, hinc gibbus. (*Ex Labill. loc. cit.*)



the wood. The fruits of both of the species, that of the *Tarairi* resembling a Damascene in size and appearance, are eagerly devoured by the large wood pigeon; and the aborigines, when they are traversing their native forests, and happen to be provided with muskets, always halt awhile beneath these trees in their fruit season (the months of October and November) for the chance of a shot. The islanders themselves also eat the fruit when boiled; by which process the poison, which abounds in it in a raw state, is extracted.

353. *L.?* *calicaris* (*Soland.*); dioica, foliis ellipticis ovato-lanceolatisve acuminatis venosis, supra nitidis, subtus glaucis, umbellis femineis axillaribus glomeratis pedunculatis subquinquefloris, pedicellis cinereo-villosis, involucri pentaphyllis imbricatis, foliolis subrotundis latissimis perianthiis 7—8 fidis, laciniis oblongis acutis, pedunculis fructûs incrassatis apice dilatatis calyciformibus. *Banks and Sol. Mss.*—*Tetranthera* Tangao. *R. Cunn. Ms.* 1834.—Tangao, *Indigenis*.

New Zealand (Northern Island).—1769, *Sir Jos. Banks*. River sides at the Bay of Islands.—1834, *R. Cunningham*.

I have never seen the male flowers, and am therefore ignorant of the structure of the anthers; but as the stigma, in all the female flowers examined, is dilated and more or less lobed, it seems probable that it may be a genuine species of *Tetranthera*, to which genus *R. Cunningham* has referred it. He has described the male flowers as involucreted and sessile. In the absence, however, of more perfect materials, I have placed it with *Solander's* in the Linnæan genus *Laurus*, to which all the plants of the order were in his day referred.

#### ATHEROSPERMÆ, *R. Br.*

*Flores* diclines, vel hermaphroditi. *Calyx* monophyllus, limbo diviso, laciniis sæpe duplici serie. *Squamulæ* faucis in fem. et hermaphr. *Cor.* 0. *Stamina* in masculis floribus numerosa, fundo calyci inserta. *Antheræ* adnatæ, biloculares, loculis valvula longitudinali a basi ad apicem dehiscenti. *Ovaria* imo plura sæpius indefinita, monosperma, ovalo erecto. *Styli* simplices. *Stigmata* indivisa. *Pericarpia* clausa seminiformia stylis persistentibus plumosis aristata, tubo aucto calycis inclusa. *R. Br.*—Genera *Atherosperma*, *Laurelia*.

#### 1. LAURELIA, *Juss.*

(PAVONIA, *Ruiz*, non *Cavanill.*)

*Flores* monoici vel dioici. ♂. *Perianth.* monophyllum. *Tubus* campanulatus seu brevissimo-cylindricus, limbus 5—13 fidus, laciniis (imbricatis) 2—3-plici dispositis. *Stamina* 7—14 ad basin singula, glandulæ duæ subrotundæ sessiles. *Antheræ* ad apicem filamentorum utrinque adnatæ, biloculares, valvis elasticè dehiscentibus apice filamentorum affixis, sursum spectantibus. *Squamulæ* 3 ad basin staminum.

♀ *Perianthium* ut in mare? *Squamulæ* pluræ ovatæ, per discum floris sparsæ. *Pistilla* numerosa, villosa. *Pericarpium* corticatum, e perianthia tubo efformatum intus pilosum, stigmatibus prominulis coronatum, in quatuor partes patentes dehiscens. *Caryopses* plures, subulatæ, pilosæ. Arbores (*Chilenses et Novæ Zelandiæ*) *glaberrimæ, sempervirentes* (odore Lauri sassafras valde redolentes), 5—20 *orgyales et ultra*. Folia *opposita ovalia, petiolata, serrata*. Flores *axillares, racemosi vel subcymosi*.

354. \**L. Novæ Zelandiæ*, dioica, foliis elliptico-oblongis obtusis coriaceis, racemis multifloris incano-villosis.

New Zealand (Northern Island). A tree thirty feet high, on the margins of the streams falling into the Keri-Keri river.—1826, *A. Cunningham*.

Of this very remarkable plant the tree bearing the female fructification has not been discovered in its native country. I have, nevertheless, not only placed it in Mr. Brown's family *Atherospermeæ*, to which it most assuredly belongs, as indicated by its opposite serrated leaves and by the structure and mode of dehiscence of its anthers, which, however, accord with those of the *Laurinæ*, but I have referred it to *Pavonia* of Ruiz and Pavon, of which it appears a second species, although it is diœcious, and the female flower and fruit remain yet to be examined.

[To be continued.]

XLII.—*Descriptions of British Chalcidites.* By FRANCIS WALKER, F.L.S.

[Continued from p. 312.]

Sp. 6. *Cirrospilus Lyncus*, Mas. et Fem. *Luteus viridi-varius, antennæ fulvæ, pedes flavi, alæ sæpe fulvescentes.*

*Fem.* Luteus: caput postice fuscum, fascia vertici viridis, ocellis confinis: oculi et ocelli rufi: antennæ fulvæ; articuli 1<sup>us</sup> et 2<sup>us</sup> supra fusi: thorax viridis: mesothorax luteus, scutum antice et scutellum viridia: abdomen luteum, segmenta media postice, discus et apex viridia: oviductus fulvus; vaginæ fusæ: pedes læte flavi; coxæ basi virides; pulvilli fulvi; alæ fulvescentes; squamulæ flavæ; nervi flavi.

*Mas.* Flavus: capitis vertici fascia viridis: antennæ fulvæ; pro- et metathorax supra virides: mesothorax apud proalis squamulas fulvescens; scutum anticum et scutellum posticum viridia: abdomen apice pallide fuscum:

\* The type of the genus is *L. Chilensis*, which may be thus defined:

*L. Chilensis*; monoica foliis ovatis oblongisve acutis, racemis subtripartitis cymosis glabris.—*L. aromatica*, *Juss. Spreng. Syst. Veg.* vol. ii.—*Pavonia sempervirens*, *Ruiz et Pavon Syst. Veg. Floræ Peruv. et Chil.* (8vo.) 1. p. 253. *Fl. Peruv. et Chil. Prodr.* (fol.) p. 127. tab. 28.—*Thiga Chilensis*, *Molini, conf. Spreng.*

*Hab.* In regno Chilensi. Arbor 40 ulnarius et ultra.